

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the present application.

***Listing of Claims:***

1. **(Currently Amended)** A process of separating or purifying 1,1,1,3,3-pentafluoropropane in which a mixture comprising at least 1,1,1,3,3-pentafluoropropane and hydrogen fluoride is subjected to a distillation step so that a distillate is obtained which comprises an azeotropic mixture consisting essentially of 1,1,1,3,3-pentafluoropropane and hydrogen fluoride, wherein under a pressure in a range of 2.95 kg/cm<sup>2</sup>-gauge to 9.60 kg/cm<sup>2</sup>-gauge, the azeotropic mixture has a at the temperature of about 40°C to about 80°C, the azeotropic mixture has a 1,1,1,3,3-pentafluoropropane/hydrogen fluoride molar ratio in a range of about 34.5/65.5 to about 48.5/51.5, and a bottom product is obtained which comprises 1,1,1,3,3-pentafluoropropane substantially free from hydrogen fluoride.

2. **(Currently Amended)** A process of separating or purifying hydrogen fluoride in which a mixture comprising at least 1,1,1,3,3-pentafluoropropane and hydrogen fluoride is subjected to a distillation step so that a distillate is obtained which comprises an

azeotropic mixture consisting essentially of 1,1,1,3,3-pentafluoropropane and hydrogen fluoride, wherein under a pressure in a range of 2.95 kg/cm<sup>2</sup>-gauge to 9.60 kg/cm<sup>2</sup>-gauge, the azeotropic mixture has a temperature of about 40°C to about 80°C, 80°C and has a 1,1,1,3,3-pentafluoropropane/hydrogen fluoride molar ratio in a range of about 34.5/65.5 to about 48.5/51.5, and a bottom product is obtained which comprises hydrogen fluoride substantially free from 1,1,1,3,3-pentafluoropropane.

3. (Currently Amended) A process of treating a feed mixture comprising at least 1,1,1,3,3-pentafluoropropane and hydrogen fluoride, which process comprises the steps of:

subjecting the feed mixture to a first distillation stage, whereby

a first distillate is obtained which comprises an azeotropic mixture consisting essentially of 1,1,1,3,3-pentafluoropropane and hydrogen fluoride, wherein under a pressure in a range of 2.95 kg/cm<sup>2</sup>-gauge to 9.60 kg/cm<sup>2</sup>-gauge, the azeotropic mixture of the first distillate has a temperature of about 40°C to 80°C, and about 80°C and a 1,1,1,3,3-pentafluoropropane/hydrogen fluoride molar ratio in a range of about 34.5/65.5 to about 48.5/51.5, and

a first bottom product is obtained which comprises 1,1,1,3,3-pentafluoropropane substantially free from hydrogen fluoride when a

1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is larger than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate, or a first bottom product is obtained which comprises hydrogen fluoride substantially free from 1,1,1,3,3-pentafluoropropane when the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate, and

subjecting the first distillate to a second distillation stage which is operated at a pressure which is different from that of the first distillation stage, whereby

a second distillate is obtained which comprises an azeotropic mixture consisting essentially of 1,1,1,3,3-pentafluoropropane and hydrogen fluoride, wherein under a pressure in a range of 2.95 kg/cm<sup>2</sup>-gauge to 9.60 kg/cm<sup>2</sup>-gauge, the azeotropic mixture of the second distillate has a temperature of about 40°C to 80°C, and about 80°C and a 1,1,1,3,3-pentafluoropropane/hydrogen fluoride molar ratio in a range of about 34.5/65.5 to about 48.5/51.5, and

a second bottom product is obtained which comprises 1,1,1,3,3-pentafluoropropane substantially free from hydrogen fluoride when the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is larger than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate, or a second bottom product

is obtained which comprises hydrogen fluoride substantially free from 1,1,1,3,3-pentafluoropropane when the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate.

4. (Previously Presented) The process according to claim 3, wherein the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is larger than the 1,1,1,3,33-pentafluoropropane/hydrogen fluoride ratio of the first distillate and also larger than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate, and the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate.

5. (Previously Presented) The process according to claim 3, wherein the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate and also smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate, and the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is

larger than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate.

6. (**Previously Presented**) The process according to claim 3, wherein the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is between the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate and the R-1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate, and the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is larger than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate.

7. (**Previously Presented**) The process according to claim 3, wherein the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the feed mixture is between the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate and the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate, and the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the first distillate is smaller than the 1,1,1,3,3-pentafluoropropane/hydrogen fluoride ratio of the second distillate.

8. (**Previously Presented**) The process according to claim 4, wherein the first distillation stage is operated at a pressure in the

range between 1 kg/cm<sup>2</sup>-G and 4 kg/cm<sup>2</sup>-G or in the range between 8 kg/cm<sup>2</sup>-G and 20 kg/cm<sup>2</sup>-G, and the second distillation stage is operated at a pressure in the range between 4 kg/cm<sup>2</sup>-G and 8 kg/cm<sup>2</sup>-G.

9. (Previously Presented) The process according to claim 5, wherein the first distillation stage is operated at a pressure in the range between 4 kg/cm<sup>2</sup>-G and 8 kg/cm<sup>2</sup>-G, and the second distillation stage is operated at a pressure in the range between 1 kg/cm<sup>2</sup>-G and 4 kg/cm<sup>2</sup>-G or in the range between 8 kg/cm<sup>2</sup>-G and 20 kg/cm<sup>2</sup>-G.

10. (Previously Presented) The process according to claim 6, wherein the first distillation stage is operated at a pressure in the range between 4 kg/cm<sup>2</sup>-G and 8 kg/cm<sup>2</sup>-G, and the second distillation stage is operated at a pressure in the range between 1 kg/cm<sup>2</sup>-G and 4 kg/cm<sup>2</sup>-G or in the range between 8 kg/cm<sup>2</sup>-G and 20 kg/cm<sup>2</sup>-G.

11. (Previously Presented) The process according to claim 7, the first distillation stage is operated at a pressure in the range between 1 kg/cm<sup>2</sup>-G and 4 kg/cm<sup>2</sup>-G or in the range between 8 kg/cm<sup>2</sup>-G and 20 kg/cm<sup>2</sup>-G, and the second distillation stage is operated at a pressure in the range between 4 kg/cm<sup>2</sup>-G and 8 kg/cm<sup>2</sup>-G.

12. (Canceled)